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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,648	03/29/2004	Yukio Ohtaki	9281-4783	2371
7590 12/16/2004				
Brinks Hofer Gilson & Lione				
P.O. Box 10395				
Chicago, IL 60610				
		EXAMINER		
		BOCURE, TESFALDET		
		ART UNIT		
		2631		
		PAPER NUMBER		

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/811,648

**Applicant(s)**

OHTAKI ET AL.

**Examiner**

Tesfaldet Bocure

**Art Unit**

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                              |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/29/04</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The Examiner has approved the Information Disclosure statement received on March 22, 2004, and the initialed copy (one copy) of the 1449 is attached with this correspondence.

### ***Specification***

3. The abstract of the disclosure is objected to because the term "means" used in the abstract of the disclosure reads as claim rather than the abstract of the disclosure. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2631

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Iwasaki (US patent number 5,513,22).

Iwasaki teaches antenna diversity receiver (see figures 1 and 2) for receiving diversity signals comprising: first and second antennas (10a and 10b); first and second receivers (20a and 20b) coupled to the respective antennas, for receiving diversity radio frequency signals; adder (53) for adding the diversity received signals; phase shifter (52) having phase difference detector (51) for shifting the relative phase of one the received signal; and control circuit for comparing and controlling the phase attenuation of the received signal and control thereafter as in claim 1.

As to the claimed signals attenuated other than the once having maximum level, the phase shifter 52 in the system of Iwasaki is controlling the phase of the main having a relative phase difference with respect to the other signal and its phase shifted to the second phase. See col. 5, lines 8-34. Therefore, the second signal is kept as a reference value, claimed maximum level, and the first signal not having the desired phase value with respect the first is controlled or attenuated.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki (us patent number 5,513,222) in view of Hecken (US patent number 4,373,207).

Iwasaki teaches the claimed subject matter in claim 1 as indicated above.

What Iwasaki fails to teach is that the phase shifter is provided in each of the receiving and controlling means controlled by the level comparing means as in claim 2.

Hecken for the same endeavor as the instant application and that of Iwasaki teaches diversity receiver (fig.1) for receiving diversity signals having two phase shifters (11 and 12) controlled by the controlling circuit 20 for controlling the phase attenuation between the received signals by the two receiving ends (not showing but look for the first and second input ports).

Even though Hecken does not show that the phase shifter being controlled by the level comparator as claimed, the phase control circuit 10 having functional equivalent for comparing the phase attenuation and controlling the level of attenuation thereafter functions the same as the instant application, i.e., comparing the phase attenuation between the received signals and control one of the received signals having phase attenuation (see abstract) .

To use the phase shifters (11 and 12) and controller (10) of Hecken in the system of Iwasaki would enable the receiver to shift the relative phase of the received signals in the range of  $180^{\circ}$  in order to improve the bit error rate (see abstract).

Therefore, it would have been obvious to one of an ordinary skill in the art to use the plurality of phase shifters corresponding to the plurality of receiver in order to improve the bit error rate at the time the invention was made.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent number 4,334,316 issued to Tanaka disclose antenna diversity receiver having a plurality of phase shifters and attenuators to the corresponding receivers.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (571) 272-3015. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

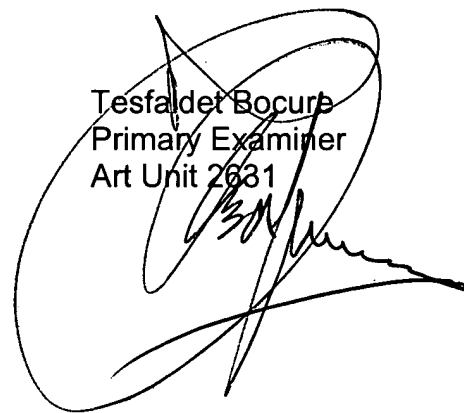
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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T.Bocure

Tesfaldet Bocure  
Primary Examiner  
Art Unit 2631

A large, stylized handwritten signature in black ink, written over the printed name and title. The signature is fluid and cursive, with a large loop at the top and a long, sweeping tail that extends to the right.